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L5: Entry 1 of 1

File: PGPB

Mar 14, 2002

DOCUMENT-IDENTIFIER: US 20020032626 A1
TITLE: Global asset information registry

Detail Description Paragraph (8):

[0035] Next will follow a discussion of how each of the individual organizations that are illustrated in the exemplary embodiment of FIG. 1 would interact with the GAIR 100. For simplicity, the interaction of the individual organizations will be described in relation to a Ford Explorer Sports Utility Vehicle (SUV). The producer 110 may be the organization that creates the asset. For example, Ford would be the producer 110 of the SUV. The producer 110 may add the asset to the GAIR 100 using one of the methods described above. In a preferred embodiment, when the producer 110 added the asset to the GAIR 100 (i.e., created the asset record) they would include all pertinent data about the asset. For instance, Ford may add data related to the components that make up the SUV (i.e., engine, tires), warranties associated with the SUV, service parameters (i.e., oil change every 3,000 miles), etc. Alternatively, all of the suppliers of components could participate in the GAIR 100 and populate the database with the component information that could then be grouped as a new, assembled asset. This would be the case if suppliers had participated in a business-to-business (B2B) electronic marketplace, or B2B exchange, and had entered their inventory of components into the GAIR 100 at the time they were created. This would allow them to simply change the ownership attribute in the GAIR 100 as the assets that are components, were transferred to the manufacture whose primary role would be to assemble the various components. As one of ordinary skill in the art would recognize there are numerous attributes about an asset that the producer 110 could set or assign in the GAIR 100 that would be well within the scope of the current invention. It can be said that the producer 110 is an original owner of the asset, and as such, controls access to the asset record.

Detail Description Paragraph (10):

[0037] The seller 112 might add data related to the asset in GAIR 100, using any of the above-mentioned methods. For example, the seller 112 might identify when the item was put for sale, when it was sold, who the new owner is, how much the item was sold for, among other things. Moreover, the seller 112 might record any changes made to the asset since the asset was received from the producer 110 (i.e., upgraded tires, rust coating, sun roof, etc.). Moreover, the seller 112 might record any items related to the asset that were transferred (i.e., warranties, service plans, etc.). As one of ordinary skill in the art would recognize there are numerous attributes about an asset that the seller 112 could set or assign in the GAIR 100 that would be well within the scope of the current invention.

Detail Description Paragraph (11):

[0038] The buyer 114 is the one who purchases the asset. When the buyer 114 expresses interest in purchasing the asset, the seller 112 may grant the buyer 114 permission to view all or a portion of the asset record. For example, the buyer 114 may be granted permission to view a parts list of the major components in the SUV, may receive the warranty, etc. If the buyer 114 decides to purchase the asset, they may have to provide the seller 112 with certain information, such as, identification in order to complete the transaction. This information may also be stored in the GAIR 100. After the transaction is complete, the seller 112 may set the ownership of the asset to the buyer 114. In one embodiment, in order for the transaction to be finalized, the buyer 114 would need to acknowledge that they are the new owner. As one of ordinary skill in the art would recognize there are numerous ways in which the buyer 114 could be notified (i.e., fax, email, pager) that they have designated as owner and thus, must acknowledge the transaction and the fact that they are the new owner.

Detail Description Paragraph (18):

[0045] FIG. 2 illustrates an exemplary class diagram showing potential associations with an asset 202. The asset 200 may be designated into a subclass, such as industry specific subclass 210. Examples of industry specific subclasses include but are not limited to; electronics, digital objects, vehicles, firearms and appliances. Assets within a particular subclass may share a number of common behaviors and attributes including, among others, condition, creation date, status, address and warranty. For example, in the subclass electronics one might choose to describe a broad group of business and consumer goods including, but not limited to: TVs, VCRs, projection displays, cameras, DVD/CD Players, computers, computer related equipment, and personal digital assistance (PDA). Typically assets are defined by a set of device dependent common characteristics, which include but are not limited to: make, model, serial number, registration number, date of creation, location (country, state, city, town, village, street, street number, postal codes).

Detail Description Paragraph (22):

[0049] Transactions 210 may be associated with documents 220 and vice versa. Documents 220 may include but are not limited to purchase orders, sale receipts, maintenance records, loan applications, warranties, guarantees, and service agreements. In one embodiment, the documents 220 may include digital objects that might contain a visual record of asset condition, such as a homeowner taking digital photographs/video of their house and its contents. In one embodiment, the registry would provide for documentation that would serve to establish the identity of organizations. For example documents 220 establishing the identity may include, but are not limited to, birth certificates, signature, location of residence, social security numbers, fingerprints and passports.

Detail Description Paragraph (26):

[0053] Organizations 230 are also associated with documents 220, and vice versa. As illustrated, an organization 230 is associated with zero or more documents 220 and a document 220 is associated with one organization 230. By way of example, one organization 230 (i.e., police department) may not have any documents 220 that it produces, or that are required to perform a particular transaction 210 (i.e., drive by known criminal establishment), while another organization 230 (i.e., owner of a car) may have one document 220 (i.e., title) or more documents 220 (i.e., title, registration, warranty, insurance) that need to be generated or produced in order to support a transaction 210 (i.e., car repair).

Detail Description Paragraph (40):

[0067] Depending on the type the asset, the producer 231 may provide a warranty with the asset (502). At a minimum the GAIR 100 will have reference made to the warranty. However, in a preferred embodiment the GAIR 100 should contain an electronic copy of the warranty therein. Having the warranty contained therein would ensure that the warranty was available to the owner at all times and would not rely on the owners filing techniques. Moreover, having the warranty available in the GAIR 100 would allow a repair person to access the warranty prior to performing repairs. That is, the owner may provide the repair person with access to the warranty contained in the GAIR 100 so that the repair person could determine in advance what was covered by the warranty.

Detail Description Paragraph (42):

[0069] The financial entity 239 may provide financial documents for the asset (510), such as an approved mortgage. As should be obvious, the seller of the asset would want to ensure that the buyer had sufficient funds to purchase the asset prior to completing the sale. Moreover, the financial entity 239 may be granted access to the GAIR 100 to obtain information related to the value of the asset (512) which may be in the form of an appraisal. Alternatively, the information with the GAIR 100 about the asset may be used by the financial entity 239 to appraise the asset. For example, if the financial entity 239 wanted to appraise the value of a home prior to approving a mortgage, the financial entity 239 may look at the various products that were used to build the home, the warranties associated with the home, and the size of the home in order to help establish the appraisal value of the home. Providing all this information gives an appraiser more objective data for which to base an appraisal value. Moreover, the financial entity 239 would have access to data that they would otherwise have to potentially go on site to obtain (i.e., dimensions, etc). Thus, providing a financial entity 239 with access to this data can reduce the amount of time and increase the efficiency of certain financial transactions 239.

Detail Description Paragraph (43):

[0070] The owner 240 of the asset may provide documents for sale (530), agree to sell

the asset (531), depreciate the asset (532) (i.e., real estate), dispose of the asset (533) (i.e., a car), deploy the asset or re-deploy the asset (534) (i.e., a radar system), file a claim with an insurance company (535), use the warranty to have the asset repaired or replaced (536), or insure the asset (537). As one of ordinary skill in the art would recognize there are numerous applications for each of these use cases and there are numerous other use cases for the owner 240, that would be well within the scope of the current invention.

Detail Description Paragraph (46):

[0073] FIG. 6 illustrates an exemplary activity diagram for the transfer of ownership of an asset. As illustrated, after producing the asset the producer 231 may create a record of the asset with all the pertinent data about the asset (600), including but not limited to setting the warranty, the condition of the asset, the value of the asset, the status, the location, any type specific attributes, and any association with components (i.e., parts lists). Once the producer 231 of the asset either becomes the owner 240 or transfers ownership of the asset to another, the owner 240 may insure, bundle or sell the asset (610). If the owner 240 decides to sell the asset they become a seller 233 and may assign ownership of the asset to the new owner (620). The buyer 232 may pay for the asset, acknowledge receipt of the asset, and set the location and condition of the asset (630). In response to payment of the asset the seller may acknowledge receipt of the payment (622). The buyer 232 may then insure the asset (632). If the buyer 232 decides to resell the asset he can do this as a new seller of the asset (624). As one of ordinary skill in the art should recognize, this activity diagram is merely one example of how activities could be performed by various organizations, and how ownership of the asset changes, during the life cycle of an asset. There are numerous other activity scenarios that would well within the scope of the current invention.

Detail Description Paragraph (59):

[0086] Service and repair organizations could make use of the registry to determine parts, warranty and availability of parts according to data obtainable regarding the object. These organizations can also quickly ascertain the eligibility for service or repair covered by warranty, e.g., home appliances, electronics, or motor vehicles.

Detail Description Paragraph (75):

[0102] FIG. 9 illustrates an exemplary master record 900. The various organizations that may write data to and read data from the master record include a manufacturer 901, a dealer 902, an owner 903, a buyer 904, an insurance company 905, a finance organization 906, law enforcement 907, and government organizations 908. The manufacturer may populate the initial production data 910 that includes manufacturer information 912, information about each of the components and assemblies that make up the vehicle 914, and any user manuals, service manuals, warranties and or other paper work associated with the purchase of a vehicle 916. According to one embodiment, the manufacturer 901, the dealer and the owner 903 would have access to the information stored in the initial production data 910.

Detail Description Paragraph (80):

[0107] The manufacture of a vehicle would create a vehicle asset record in addition to manufacturing the vehicle. The vehicle asset record includes all pertinent information including but not limited records on sub-components, assembly and other manufacturing details, warranties, specifications, parts, owners manuals, maintenance and service schedules, and much if not all of the supply chain management and logistics of assembly. These records would be used subsequently for purposes such as quality assurance, tracking, repair and replacement part identification and procurement, appraisal, insurance, law enforcement purposes, purchasing decisions, marketing, etc. In a preferred embodiment, all pertinent records of all aspects of the vehicle manufacturer would be included in the vehicle asset record. These records encompass and could be tied-in to the manufacturer's own supply chain management system, which would track parts and other assembly details.

Detail Description Paragraph (86):

[0113] Other manufacturers could use the GAIR to more accurately forecast failures and other expected costs (such as would be involved in recalls, warranty "actuarial" analyses, parts and service evaluations, etc.). Sub-components of the multi-vendor vehicle asset could thus be tracked and evaluated.

Detail Description Paragraph (87):

[0114] In one embodiment, the manufacturer or dealer (e.g. GM) would offer this service for free. The auto buyer would be provided with a complete record of the origin and

creation of the asset and the access to recording of subsequent relevant incidents during the life of the vehicle. Such incidents include manufacturer issued updates and recalls, dealer scheduled service, accidents and repairs, insurance claims, satisfaction of liens, involvement in criminal activity, transfer of ownership, etc. The owner would be responsible, along with vehicle's other co-interested parties such as insurance, finance, law enforcement agencies, etc. for accessing and updating the vehicle's record. This could be a free or fee for service. It could be offered for a specific time period (e.g. duration that auto is under warranty or service contract) or offered indefinitely to a purchaser as a free service or for some consideration from the purchaser/owner. The vehicle registry service could be transferable or non-transferable (e.g. to a subsequent owner) depending on the interests of the registry service provider.

Detail Description Paragraph (92):

[0119] An authentication and verification system (e.g. security) would prevent unauthorized or illicit modification or deletion of records or their elements. In one embodiment the reporting of accidents and damage, breakdowns or service needs, theft, repair, service, etc. would be mandated through the registry provider. For instance, while the vehicle is under manufacturer warranty, the manufacturer, may require the owner (or other party) to report any of the aforementioned events under the penalty of voiding the vehicle (or part) warranty. This would help to insure that the complete history of the vehicle was maintained and accurate.

Detail Description Paragraph (95):

[0122] Depending on the circumstance, various access privileges and ownership rights would be transferred to appropriate parties that may access and update the record when needed. Typically, when the vehicle was purchased, access and ownership rights would be given to the purchaser and she could access the records via the Internet. The record could be maintained by the dealer or manufacturer (or other) as a service to the customer, logging all service and other events pertaining to the vehicle in the record within the registry, and notifying the owner and others of the same where appropriate. This registry service then would provide the owner with a centralized and easily accessible updated record of her vehicle and all status changes relating to the vehicle. The owner could access and grant others access to the vehicle's record when appropriate. Communication about particulars of the vehicle, its warranties, service and repair, etc. would be communicated between the owner and dealer or manufacturer via the registry. Examples of other interested parties and their interaction with the asset registry and specific vehicle record are as follows:

Detail Description Paragraph (105):

[0132] As already discussed, after the purchase is completed, the seller (e.g. manufacturer) would agree to maintain the vehicle record and to update everything with which the manufacturer/dealer does regarding the vehicle such as service, repairs, recall, etc. This service could be provided as a part of the warranty or other reason to incentivize the customer. The owner however, would be responsible for ensuring that all other events, and status changes were added to the vehicle record (i.e. the owner controls access to third parties as well). Alternatively, the finance company could perform this role since they too would have a strong ownership interest in the vehicle.

Detail Description Paragraph (113):

[0140] Prospective purchasers (including the original lessors who may want to purchase the vehicle) would have access to the record, thus being better informed regarding the history and condition of the vehicle and potentially more confident regarding the purchase and better able to assess its value (e.g. offer price, warranties, etc.). Similarly the seller (e.g. lessee) would be better able to accurately appraise and price the vehicle and any extended warranty or service plans to be offered. The same utility of accurately valuing the asset would also be readily available to other interested parties, including insurance and finance organizations as well as government tax assessors and regulators (e.g. NTSB, EPA) as discussed previously. A business method for disposing of leased vehicles has been described.

Detail Description Paragraph (119):

[0146] For existing assets such as these, which are those already purchased before "registration at production/sale" is implemented or which were not registered at manufacturer, the asset record can always be created by owner (or other interested parties). Such a web-service as already described would assist the owner in creating the record and adding the appropriate records. This would be particularly useful if the owner wished to sell the vehicle, the web service providing the creation of the asset

record, and the advertising for sale or auction of the vehicle. This service would be provided for a fee, contingency or some other consideration.

Detail Description Paragraph (123):

[0150] For instance, computer systems fit both categories. Computers are assembled for sale via distributors in which case they are made to stock and a limited number of models are available (per manufacturer). Computers can also be made to order, for instance by Dell computer or gateway. Asset records and a computer asset registry, for instance, would have provided multiple benefits to manufacturers, consumer, and other parties in similar ways as that of the vehicle asset registry. A manufacturer, distributor, or other interested party would provide such a registry service. For instance, Dell would allow customers to "build" their own computer online, and in the process an asset record would be created detailing the individual parts, assembly details, manuals, warranties, services agreements, etc. Alternatively, Dell (or distributor/retailer or other 3.sup.rd party) would construct the record and transfer the record with the computer asset (preferably by granting registry access through the Internet).

Detail Description Paragraph (126):

[0153] A second specific industry that could use the GAIR is the real-estate industry (i.e., property). FIG. 10 illustrates an exemplary real estate master record 1000. Entities that may write and/or read data to the master record 1000 include, but are not limited to, builder/seller 1001, finance organization 1002, insurance organizations 1003, lawyers 1004 and potential buyers. The master real-estate record may include an asset record 1010, home specifications 1015, public records 1020, lien records 1025, warranties 1030, mortgage/lien holders 1035, building records 1040, appraisals 1045, repair/improvements 1050, other assets 1055, and insurance 1060. The public records 1020 may be transferred into the master record 1000 from a public record database 1070 that includes mortgage holder 1075, title history 1080, lien holder 1085 and other legal data 1090.

Detail Description Paragraph (130):

[0157] As the property was further developed the property record would be updated by the developer (or other) to reflect these improvements. Such improvements include roads, utilities, water and sewer, and buildings. By adding/updating records corresponding to the improvements, the development or evolution of the real estate asset is chronicled. An example of a developed property is a new home (turn key) which is ready to be sold or leased. The property record at this point would contain not only details on the land, but on the buildings and other improvements. Such details may include, blueprints, designs and all building specifications, construction materials list, contractor warranties, appliance asset records and house components, warranties, and any other information desired.

Detail Description Paragraph (133):

[0160] If owner has a question or problem with an appliance, service and/or warranty claim would be readily obtained, because the owner would have the specs of the appliance that would facilitate repair. This would require an interface with the appropriate parties as can be easily accomplished as evident to those skilled in the art. The owner would now maintain the registry (or registry provider would provide such as service to the property owner) in that any improvements or repairs, legal or other changes occurred which affected the objective or subjective value of the home. Appraisals and other value related functions and transactions would be performable via the property record.

Detail Description Paragraph (155):

[0182] Also, the manufacturer who would be able to notify/update the owner via the registry of any new information (e.g. change in contact information, expiration of warranty, etc.)

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File: PGPB

Jun 20, 2002

DOCUMENT-IDENTIFIER: US 20020077923 A1

TITLE: Method and apparatus for performing on-line product registrationAbstract Paragraph (1):

A method and apparatus is provided for performing on-line registration over an open computer network (e.g., the Internet) of an item previously purchased by a customer. The method begins by receiving over the open computer network a request from the customer to register the purchased item. Next, a registration form is provided over the open computer network, which is to be completed by the customer. The registration form requests customer information such as an identifier identifying the purchased item. Upon receiving a completed registration form from the customer, a database is searched to generate a list of purchasable items. The selection of the list of purchasable items is based at least in part on the identifier that identifies the purchased item. Finally, the customer is provided with the list of purchasable items and an opportunity to purchase any one or more of the purchasable items.

Summary of Invention Paragraph (2):

[0001] The present invention relates generally to a method and apparatus by which a customer registers over the Internet a previously purchased product, and more specifically to a method and apparatus for offering to sell the customer additional products during the registration process.

Summary of Invention Paragraph (4):

[0002] The flow of goods and services in a successful market economy depends in part on the ability of customers to learn what goods and services are available and the ability of merchants to learn what goods and services are desired by customers. For example, many different ways are available for consumers to obtain information about goods and services. Traditional avenues include visiting stores, browsing catalogs, viewing advertisements on television, newspapers and the like, and, more recently, searching the Internet. Likewise, merchants try to collect information about consumer's desires and buying habits so that they can better serve their current customers and gain new ones, thereby enhancing profits. Some ways merchants use to collect this information includes maintaining files of current customer purchase data, obtaining mailing lists from other vendors, and test marketing.

Summary of Invention Paragraph (5):

[0003] From a consumer perspective, traditional methods of advertising are often problematic. It is very difficult for consumers to select items of interest from the daily bombardment of advertising, which include television and radio ads, billboards, newspaper and magazine advertisements and inserts, posters and the like. Moreover, because advertising is ephemeral, it is unlikely to be available when the customer will be most interested and receptive to it. To identify and locate a particular item of interest may require many phone calls, visits to stores and extensive searching on the Internet.

Summary of Invention Paragraph (6):

[0004] From the merchant's perspective, traditional methods of advertising are also problematic. In particular, it is very expensive to target advertisements to specific customers. One approach is to advertise in specialized publications or on specialized web sites that should appeal to very specific consumers. Another approach is to advertise on a web site that is somehow related to the content of the web page. For example, a web page of a real estate company might include advertising banners containing advertisements for mortgage companies. Even in these cases it remains difficult to determine the particular needs and interests of a given consumer.

Furthermore, it is also difficult to reach those consumers who are currently interested in a given item and who might be predisposed to make a purchase. Merchants need a mechanism for delivering information when it would be most useful to a receptive consumer. That is, the merchant ideally needs to know both what a customer wishes to purchase and when he wants to purchase it.

Summary of Invention Paragraph (8):

[0005] The present inventor has realized that at about the time of making an initial purchase, a customer is often inclined to additionally purchase product upgrades or enhancements, or additional products that can enhance the use and enjoyment of the initially purchased product. Presumably, this may be because the consumer's attention is often most focused on the purchased product at the time of the purchase.

Summary of Invention Paragraph (9):

[0006] The present invention provides a method of performing on-line registration over an open computer network of an item previously purchased by a customer. The method begins by receiving over the open computer network a request from the customer to register the purchased item. Next, a registration form is provided over the open computer network, which is to be completed by the customer. The registration form requests customer information such as an identifier identifying the purchased item. Upon receiving a completed registration form from the customer, a database is searched to generate a list of purchasable items. The selection of the list of purchasable items is based at least in part on the identifier that identifies the purchased item. Finally, the customer is provided with the list of purchasable items and an opportunity to purchase any one or more of the purchasable items.

Summary of Invention Paragraph (11):

[0008] In accordance with another aspect of the invention, customer information requested on the registration form further includes a customer name, physical address, electronic mail address and a phone number. The customer information requested on the registration form may further include a list of one or more items in possession of the customer having functionality associated with the purchased item.

Summary of Invention Paragraph (14):

[0011] In accordance with another aspect of the invention, upon selection of a selectable icon by the customer, a visual representation is provided of the selected purchasable item corresponding to the selected icon. In some cases the visual representation of the selected purchasable item may include a diagram depicting the interoperability between the purchased item and the selected purchasable item.

Brief Description of Drawings Paragraph (4):

[0014] FIG. 3 shows an illustrative customer interface device that may be employed in connection with the present invention.

Brief Description of Drawings Paragraph (5):

[0015] FIG. 4 is an architectural block diagram of the customer interface device illustrated in FIG. 2.

Brief Description of Drawings Paragraph (6):

[0016] FIG. 5 is a flowchart depicting how a customer registers a previously purchased product and purchases additional products.

Brief Description of Drawings Paragraph (7):

[0017] FIG. 6 shows an illustrative electronic product registration form that may be displayed as a web page on the customer interface device.

Brief Description of Drawings Paragraph (8):

[0018] FIG. 7 shows an example of a web page displaying a wiring diagram that includes a visual representation of the previously purchased product and any additional products identified by the customer on the product registration form.

Brief Description of Drawings Paragraph (9):

[0019] FIG. 8 shows the web page of FIG. 7 with a visual representation of a product that has been selected by the customer for prospective purchase.

Detail Description Paragraph (2):

[0020] The system architecture of one embodiment of the apparatus and method of the present invention is illustrated with reference to FIG. 1. The system includes a customer interface device and a Merchant web server that are in communication with one

another over an open network 120. Open network 120 is a collection of individual networks that are linked together by a set of standard protocols. One example of an open network is the Internet, which employs standard protocols such as TCP/IP and HTTP. Merchant web server 130 is a computer system that provides over the Internet user-viewable hypertext documents (commonly referred to a web document or web page) which are interlinked with one another. Currently, the primary protocol for allowing applications to locate and acquire web documents is HTTP, and the web pages are encoded using HTML. However, as used herein, the terms "web" and "web site" are intended to encompass markup languages and transport protocols which may be used in place of, or in addition to, HTML and HTTP.

Detail Description Paragraph (3):

[0021] Merchant web server 130 provides a web site having various functionality which allows customers to electronically register products they have purchased. Merchant web server 130 may be operated by the manufacturer, distributor, retailer, or the like, of the purchased product. Alternatively, merchant web server 130 may be operated by an associate affiliated with one or more of these business entities. Merchant web server 130 may also provide additional functionality allowing customers to obtain product information and purchase products. In the case of the latter the web site operator handles the various order processing, shipping, collections, and customer service tasks associated with the sale of goods.

Detail Description Paragraph (4):

[0022] By accessing merchant web server 130, the customer can register products he or she has purchased to activate warranties and provide traditional product registration information such as product updates, recalls, and promotions, for example. In accordance with the present invention, the registration process provides an opportunity for the merchant to offer to sell the customer additional products that may enhance his or her use and enjoyment of the purchased product being registered. For example, if the purchased product is a personal computer, the merchant may offer the customer various accessories such as a backup drive or modem, for example. Moreover, the registration process may be used to elicit information from the customer that allows the merchant to more precisely offer the customer particular products or services that best suit his or her needs. Returning to the example of the personal computer, during the registration process the merchant may prompt the customer to identify any additional equipment they own which is associated with the computer such as a game board. If the merchant determines that the customer does not have an appropriate user interface such as a joystick, for example, the merchant may immediately offer the customer a selection of different joysticks.

Detail Description Paragraph (5):

[0023] As shown in FIG. 2, merchant web server 130 includes central processor (CPU) 205, RAM 215, ROM 220, clock 235, operating system 240, network interface 245, and data storage device 250. Web server 130 may be a conventional personal computer or computer workstation with sufficient memory and processing capability. Web server 130 200 must be capable of high volume transaction processing, performing a significant number of mathematical calculations in processing communications and database searches. Illustrative processors that may be employed include a Pentium microprocessor, commonly manufactured by Intel Inc., a PowerPC available from Motorola, or an UltraSPARC processor available from Sun Microsystems.

Detail Description Paragraph (6):

[0024] Data storage device 250 may include hard disk magnetic or optical storage units, as well as CD-ROM drives or flash memory. Data storage device 250 contains databases used in the processing of transactions in the present invention, including customer database 260, product database 255, shopping cart database 265, and HTML document database 270. In one embodiment of the invention database software, such as available from Oracle Corporation, is used to create and manage these databases.

Detail Description Paragraph (7):

[0025] Network interface 245 is the gateway to communicate with customers through their respective interface devices 110. Conventional internal or external modems may serve as network interface 245. Network interface 245 supports modems at a range of baud rates from 1200 upward, but may combine such inputs into a T1 or T3 line if more bandwidth is required. In one embodiment of the invention, network interface 245 is connected with the Internet and/or any of the commercial online services such as America Online, CompuServe, or Prodigy, allowing members access to the service from a wide range of online connections. Several commercial email servers include the above functionality. Users can exchange messages with enclosures such as files, graphics, video and audio.

Detail Description Paragraph (8):

[0026] While the above embodiment describes a single computer acting as the merchant web server 130, those skilled in the art will realize that the functionality can be distributed over a plurality of computers. In another embodiment, web server 130 may be configured in a distributed architecture, wherein the databases and processors are housed in separate units or locations.

Detail Description Paragraph (9):

[0027] FIG. 3 shows a block diagram of an illustrative customer interface device 300 that may be employed in connection with the present invention. While the device 300 is illustrated as a general purpose computer, those of ordinary skill in the art will recognize that the user interface device may be any device that can communicate with, and download information from, an open computer network such as the Internet. The device 300 includes a system unit 321, a keyboard 325, a mouse 326 and a display unit 327. The screen 328 of the display unit 327 is used to present a graphical user interface (GUI). The graphical user interface supported by the operating system of the device 300 allows the user to use a point and shoot method of input, i.e., by moving the mouse pointer 329 to an icon representing a data object at a particular location on the screen 328 and pressing on the mouse buttons to perform a user command or selection. This type of arrangement also allows the user to directly manipulate an icon from one position to another on the screen, all in a known manner.

Detail Description Paragraph (10):

[0028] Turning to FIG. 4, the system unit 321 includes a system bus or plurality of system buses 431 to which various components are coupled and by which communication between the various components is accomplished. The microprocessor 432 is connected to the system bus 431 and is supported by read only memory (ROM) 433 and random access memory (RAM) 434 also connected to system bus 431. The ROM 433 contains among other code the Basic Input-Output system (BIOS), which controls basic hardware operations such as the interaction of the disk drives and the keyboard. The RAM 434 is the main memory into which the operating system and application programs are loaded. The memory management chip 435 is connected to the system bus 431 and controls direct memory access operations including, passing data between the RAM 434 and hard disk drive 436 and floppy disk drive 437. The CD ROM 442, also coupled to the system bus 431, is used to store a large amount of data, e.g., a multimedia program or large database. Also connected to this system bus 431 are various I/O controllers: the keyboard controller 438, the mouse controller 439, the video controller 440, and the audio controller 441. The keyboard controller 438 provides the hardware interface for the keyboard 25, the controller 439 provides the hardware interface for the mouse (or other point and click device) 426, the video controller 440 is the hardware interface for the display 427, and the audio controller 441 is the hardware interface for the multimedia speakers 425a and 425b. A network interface card (NIC) interfaces to the I/O controller 450 to enable communication via path 456 to other computers over the computer network.

Detail Description Paragraph (12):

[0030] FIG. 5 shows an exemplary process by which a customer registers a purchased product on the merchant's web site. The registration process begins at step 510 by selecting the proper hyperlink containing online registration instructions. The central processor 205 accesses the local database of HTML documents and, at step 520, returns an online registration application document to the customer's web browser. The customer can then fill out the detailed online registration form 600.

Detail Description Paragraph (13):

[0031] FIG. 6 shows an illustrative embodiment of the online registration form 600. The registration form requests information about the customer such as his or her name, physical and email address, phone number, the purchased product to be registered (as identified, for example, by an SKU number derived from a universal product code, a serial number or other manufacturer code, or the like) and the retailer from whom the product was purchased (assuming that the merchant is not the retailer). In addition, the customer is provided space to identify other products they own which are associated with the product being registered. The customer may simply type the items in the available window. Alternatively, or in addition thereto, the customer may be offered the option of selecting items from a pull-down menu that is pre-populated based on the purchased product. It should be noted that FIG. 6 is merely illustrative of the many registration formats that may be employed and only representative of the many types of information that may be requested.

Detail Description Paragraph (14):

[0032] Referring again to FIG. 5, once the electronic registration form is completed by the customer at step 530, it is sent from the customer's interface device 110 to the merchant web site 130 for further processing. In response to the submission of the enrollment form, the central processor 205 processes the information contained on the registration form at step 540. In one embodiment of the invention, an agent is used to scan the form for pre-specified terms and if such a term is found, to flag the application for further review either electronically or manually by a staff member. If no such term is found and the application is complete, the central processor 205 accepts the registration form.

Detail Description Paragraph (15):

[0033] Once the registration form has been completed the central processor 205 generates a unique customer ID to be assigned to the customer, also at step 540. In addition, the central processor 205 creates a database entry corresponding to the customer and stores the customer ID and the information provided by the customer on the registration form as a unique entry in the customer database 260. Database 260 may be any type of data repository including, for example, an SQL table or ASCII text file. This database entry allows the merchant web server 130 to properly track the customer's interests and purchases, as further described below.

Detail Description Paragraph (16):

[0034] Based on the information provided by the customer on the registration form, central processor 205 searches product database 255 at step 550. Product database 255 includes product information such as the features and specifications of the various products available from the merchant. Upon retrieving the product information for the product being registered, the central processor 205 determines if any upgrades or product enhancements (e.g., product enhancements) are available for it. If so, they are sent to the customer's interface device 110 at step 560 so that the customer can determine if he or she is interested in them. If the customer is indeed interested in the upgrade or product enhancement, it may be purchased directly from the merchant's web site at step 570 in the manner described below.

Detail Description Paragraph (17):

[0035] In addition to product upgrades or enhancements, the customer may also be offered additional products that can be used in conjunction with the product being registered. The additional products to be offered are selected based on the products the customer has identified as owning and being associated with the product being registered. Once again, the customer may purchase the additional products directly from the merchant's web site in the manner described below.

Detail Description Paragraph (18):

[0036] The present invention will be further illustrated by way of an example. For instance, the product being registered by the customer may be a stereo receiver. Accordingly, after the registration form has been submitted and processed, central processor 205 retrieves the product information pertaining to the particular stereo receiver specified by the customer. As shown in FIG. 7, the customer is presented with a visual representation of the stereo receiver 710. The illustration also includes a wiring diagram showing a visual representation of any other components that the customer has specified as being interconnected to the stereo receiver. For example, in FIG. 7, a tape player 720 and speakers 730 are shown connected to the stereo receiver 710. Moreover, the tape player and speakers are shown being connected to the appropriate inputs of the receiver 710. The customer is further presented with a list of additional components that can be connected to any of the unused inputs of the stereo receiver. In this example a compact disk player, a phonograph, and a signal processor such as a graphic equalizer are listed as optional components. The additional components function as selectable icons. If the customer is interested in obtaining more information, he or she simply selects the component of interest. As shown in FIG. 8, a visual representation of the selected component appears on the display of the customer's interface device, properly interconnected to the stereo receiver. In some embodiments of the invention, a detailed product description of the selected component also appears on the display. By allowing the customer to easily visualize how the additional components will interconnect with, and facilitate their use and enjoyment of, the product being registered, the merchant increases the likelihood that the customer will purchase the product being registered. This may be particularly true for products the customer initially may be unfamiliar with such as a signal processor.

Detail Description Paragraph (19):

[0037] The additional products to be offered to the customer need not be determined strictly by the product being registered. In the previous example, if the customer

indicates that he or she has a particular brand of pair of speakers, for instance, the customer may be offered the option of purchasing a subwoofer designed to accompany those particular speakers.

Detail Description Paragraph (20):

[0038] One important advantage accruing from the present invention is that the customer can be provided with a well targeted, customized list of items that he or she may be particularly interested in. For example, if the stereo receiver being registered is an expensive, high-end unit typically purchased by discerning audiophiles, then presumably the customer will be interested in additional items of equal quality. Accordingly, the additional components being offered to the customer should all be equally high-end units, or least the closest available from the merchant. In this way the customer does not have to view the many lower-end units which are not likely to be of interest.

Detail Description Paragraph (21):

[0039] Another important advantage accruing from the present invention is that the merchant is able to get the customer's attention when he or she is often inclined to make an investment in product enhancements or additional products that can enhance the use and enjoyment of the initially purchased product. This behavior may result from the customer's initial excitement and enthusiasm for the purchase.

Detail Description Paragraph (22):

[0040] Continuing with reference to FIG. 5, if the customer decides to purchase an item or items, he or she can select an icon that may be included with the product information for that item or items, which has already been retrieved. The icon allows the selected item to be added to a customer "shopping-cart." The shopping-cart is a customer-specific data structure that is generated and maintained in shopping cart database 265 of merchant web server 130. The information contained in shopping cart database 265 includes a list of products that have been selected by the customer for prospective purchase. In one embodiment of the invention, the shopping cart remains available to the customer for an extended period of time, e.g., one month, following the most recent access by the customer, allowing the customer to discontinue and later resume a session without loss of data. In this way the customer can effectively conduct an extended shopping session that begins with the registration process.

CLAIMS:

1. A method of performing on-line registration over an open computer network of an item previously purchased by a customer, said method comprising the steps of: receiving over the open computer network a request from the customer to register the purchased item; providing over the open computer network a registration form to be completed by the customer, said registration form requesting customer information including an identifier identifying the purchased item; upon receiving a completed registration form from the customer, searching a database to generate a list of purchasable items, said list of purchasable items being selected based at least in part on the identifier which identifies the purchased item; and providing the customer with the list of purchasable items and an opportunity to purchase any one or more of the purchasable items.
3. The method of claim 1 wherein said customer information requested by the registration form further includes a customer name, physical address, electronic mail address and a phone number.
4. The method of claim 1 wherein said customer information requested by the registration form further includes a list of one or more items in possession of the customer having functionality associated with the purchased item.
6. The method of claim 1 further comprising the steps of assigning a unique identification number to the customer and creating a database entry for the customer that includes the customer information.
10. The method of claim 4 wherein said purchasable items include items that are usable in conjunction with said one or more items in possession of the customer having functionality associated with the purchased item.
12. The method of claim 1 wherein the step of providing the customer with the list of purchasable items includes providing the customer with a selectable icon that represents each of the purchasable items.
13. The method of claim 12 wherein, upon selection of a selectable icon by the

customer, further providing a visual representation of the selected purchasable item corresponding to the selected icon.

16. The method of claim 4 further providing a visual representation of said one or more items in possession of the customer having functionality associated with the purchased item.

17. The method of claim 16 wherein said visual representation of said one or more items in possession of the customer includes a diagram depicting the interoperability between the purchased item and said one or more items in possession of the customer.

19. The method of claim 4 wherein said list of purchasable items is additionally based on said list of one or more items in possession of the customer having functionality associated with the purchased item.

20. The method of claim 1 further comprising the step of receiving a purchase request from the customer to purchase any one or more of the purchasable items.

21. The method of claim 1 wherein the step of providing the customer with the opportunity to purchase any one or more of the purchasable items includes the step of providing a selectable icon linked to a shopping cart database.

22. The method of claim 4 wherein said one or more items in possession of the customer having functionality associated with the purchased item includes one or more items interconnected to the purchased item.

25. The method of claim 1 wherein the step of providing the customer with the list of purchasable items includes the step of providing the list over the open computer network.

27. An apparatus for performing on-line registration over an open computer network of an item previously purchased by a customer, comprising: a controller unit for receiving over the open computer network a request from the customer to register the purchased item; means for providing over the open computer network a registration form to be completed by the customer, said registration form requesting customer information including an identifier identifying the purchased item; means for searching a database to generate a list of purchasable items upon receiving a completed registration form from the customer, said list of purchasable items being selected based at least in part on the identifier which identifies the purchased item; and means for providing the customer with the list of purchasable items and an opportunity to purchase any one or more of the purchasable items.

29. The apparatus of claim 27 wherein said customer information requested by the registration form further includes a customer name, physical address, electronic mail address and a phone number.

30. The apparatus of claim 27 wherein said customer information requested by the registration form further includes a list of one or more items in possession of the customer having functionality associated with the purchased item.

32. The apparatus of claim 27 wherein said controller assigns a unique identification number to the customer and further comprising a database having a database entry for the customer that includes the customer information.

36. The apparatus of claim 30 wherein said purchasable items include items that are usable in conjunction with said one or more items in possession of the customer having functionality associated with the purchased item.

37. The apparatus of claim 36 wherein said means for providing the customer with the list of purchasable items includes means for providing the customer with a selectable icon that represents each of the purchasable items.

40. The apparatus of claim 30 further comprising means for providing a visual representation of said one or more items in possession of the customer having functionality associated with the purchased item.

41. The apparatus of claim 16 wherein said visual representation of said one or more items in possession of the customer includes a diagram depicting the interoperability between the purchased item and said one or more items in possession of the customer.

42. The apparatus of claim 27 further comprising means for receiving a purchase request from the customer to purchase any one or more of the purchasable items.